

Technical Notes from BH Review

Bradenhead NTO: Drilling Wells in the Buzzar, Mamm Creek and Rulison Fields, Garfield and Mesa County specifically states that “order requirements for all wells with the BMA” where BMA is the bradenhead (BH) monitoring area. Hence, the requirement is for all existing and new drilled wells-both production and disposal.

- **Axia** has (1) well listed in the BMA. The comment section states that the required annual BH monitoring was not conducted.
- **Bill Barrett** has (993) wells that were reported to be located in the BMA. The operator report to COGCC in 2013 states that none of the wells in the BMA had pressure or fluid flow during the required annual BH monitoring. EPA reviewed (209) production wells:
 - (202) open annulus through Wasatch
 - (56) open annulus through Wasatch and Williams Fork
 - Many of the wells had cross-over on the neutron through the portions of the well that does not have cement isolation
- **DeJour** has (30) wells that were reported to be located in the BMA. The operator report to COGCC in 2013 states that none of the wells in the BMA had pressure or fluid flow during the required annual BH monitoring.
- **EnCana** has (1962) wells that were reported to be located in the BMA.
 - (7) reported water in BH: (5) open through Wasatch and (3) open through Wasatch and Williams Fork; (1) not analyzed and (1) insufficient data
 - (812) reported initial pressure in BH: (245) having pressure >50 psi
 - (78) reported final pressure after 30 min blowdown: (9) having pressure >50 psi

Venting Status reported:

 - (14) flaring
 - (1626) shut-in
 - (47) venting
- **Maralex** has (3) wells that were reported to be located in the BMA. These wells were not initially reviewed by EPA, hence exposed geology is not available.
 - (2) reported water and pressure in BH
 - surface casing set at 309 ft-no CBL
 - Surface casing set at 405 ft with TOC at 6170 ft
- **Oxy** has (74) wells that were reported to be located in the BMA. These wells were not initially reviewed by EPA, hence exposed geology is not available.
 - (0) reported water in BH
 - (42) reported initial pressure in BH: (30) wells having pressure >50 psi
 - (8) reported final pressure in BH: (5) having pressure >50 psi

- **Piceance Energy** has (234) wells that were reported to be located in the BMA.
 - (0) reported water in BH
 - (48) reported pressure in BH: (17) having pressure >50 psi
- **Ursa** has (219) wells that were reported to be located in the BMA.
 - (6) reported water in BH: (6) open through Wasatch and (2) open through Wasatch and Williams Fork
 - (124) reported initial pressure in BH: (42) having pressure >50 psi
 - (96) reported final pressure in BH: (41) having pressure >50 psi
- **Willsource** has (1) well that were reported to be located in the BMA.
 - (0) reported water in BH
 - (0) reported initial pressure in BH
 - (0) reported final pressure in BH
- **WPX** has (181) wells that were reported to be located in the BMA.
 - (20) reported water in BH: (19) open through Wasatch and (7) open through Wasatch and Williams Fork
 - Note: (1) had cement squeeze but still reports liquid flow
 - (124) reported initial pressure in BH: (57) having pressure >50 psi
 - (96) reported final pressure in BH: (41) having pressure >50 psi